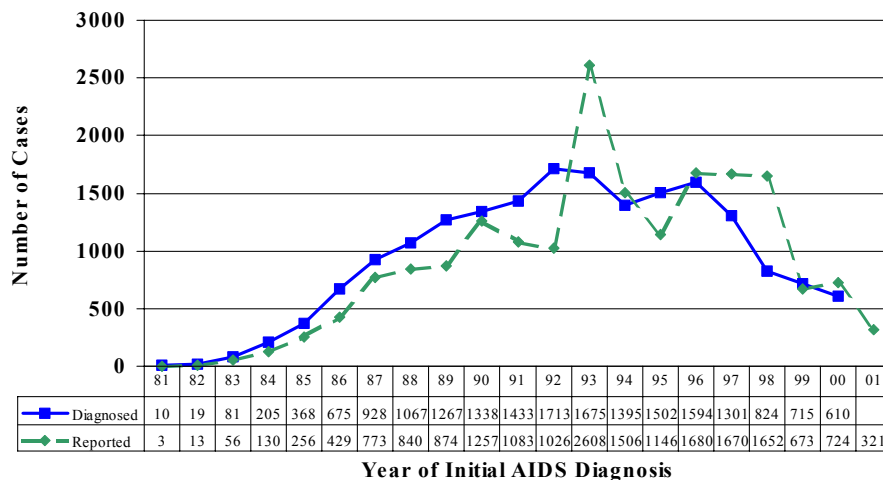


4. AIDS/HIV INFECTION

AIDS, unlike syphilis and other sexually transmitted diseases, has a long incubation period, often exceeding ten years from infection to illness. Because AIDS cases may not be reported in the year in which they were diagnosed, information about cases may be compared by year of report, or by year of diagnosis. This report will include data on cases reported through June, 2001; data may not yet be fully reported and should be considered preliminary and subject to later revision.

**Figure 4.1 Houston/Harris Co. AIDS Cases By
Date of Diagnosis & Date of Report
Diagnosed 1981-2000**



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.1 The above chart compares the number of AIDS cases reported each year to the number of cases diagnosed each year in the Houston/Harris County area.

The reported AIDS cases spiked in 1993, corresponding to the changes in the surveillance definition of HIV and AIDS made by the Centers for Disease Control and Prevention. Four new conditions were added to the definition of an AIDS defining diagnosis, including the laboratory marker of a CD4 lymphocyte count less than 200. The surveillance definition change allowed the monitoring of less symptomatic HIV infection, prior to the occurrence of an AIDS defining opportunistic infection or malignancy. Because this change was in the surveillance methodology, it had a greater impact on the reported number of cases than on the number of cases diagnosed.

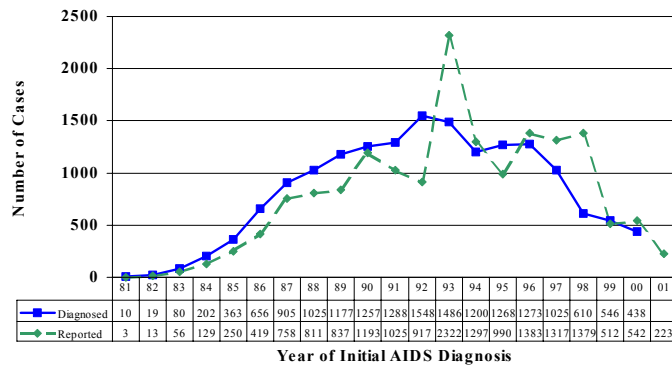
Figure 4.2 and 4.3. The number of AIDS cases diagnosed and reported has decreased steadily among males since the peak in 1992. AIDS cases reported among women did not peak until 1996. In 2000, there were 2.5 times more males diagnosed with AIDS than females.

Data comparisons of race, age, and risk behavior, can be made using total numbers of cases, or proportional changes in the demographic and risk behavior mix of the population with AIDS. AIDS case data can also be compared across populations using strata-specific rates.

During the past three years, the widespread use of multiple drug regimens has slowed the progression of HIV infection to AIDS. The 10-year lag, often cited as the time for progression to AIDS, is no longer relevant. HIV infection is being identified earlier, and with more effective treatment, the transition to AIDS may be delayed indefinitely. Therefore, it is difficult to relate the time of diagnosis with AIDS to the actual time of infection. Comparing AIDS demographic data over time can indicate shifts and trends that are developing. However, the use of new medications which delay progression to AIDS results in fewer AIDS cases and a corresponding decrease in deaths from AIDS. Consequently, there is an expanding number of persons living with HIV infection and the potential for an increase in exposure to HIV infection by persons participating in risky behavior.

It is difficult to estimate the number of people with HIV infection in a community. No accurate data on the number of people participating in certain risk behaviors exists, and a general population seroprevalence study has not been conducted. Most studies have been limited to people known to be at risk, and to easily accessible populations.

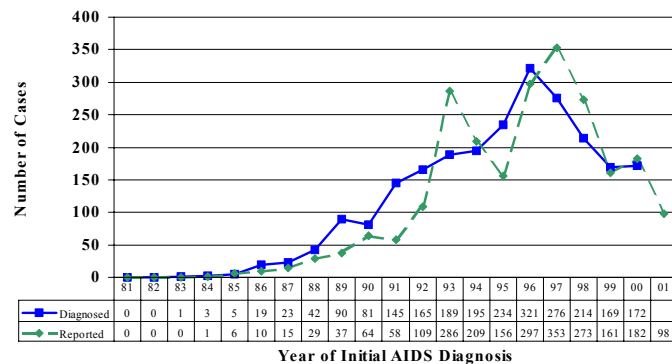
4.2 Houston/Harris Co. AIDS Cases By Date of Diagnosis & Date of Report - MALES
Diagnosed 1981-2000



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

4.3 Houston/Harris Co. AIDS Cases By Date of Diagnosis & Date of Report - FEMALE
Diagnosed 1981-2000



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

The behaviors which place a person at risk of contracting HIV are well known and documented from recording the behaviors of over 600,000 people with AIDS nationally. HIV is transmitted by the exchange of infected body fluids, primarily blood, semen, and vaginal fluids. These exchanges take place during sexual relations and the sharing of needles and other equipment in injection drug use. Information regarding the trends in risk behaviors of the local HIV infected population can help to indicate the direction for prevention efforts.

Behaviors that may place individuals at increased risk of HIV and other STDs include: male to male sex; being a female partners of bisexual men; risky sexual behavior, including multiple partners and lack of condom use; injection drug use; and cocaine use.

Estimates for male gay sex can be found from the National Health and Social Life Survey. Of men surveyed, 7.3% in urban areas and 4.8% in suburban areas reported at least one same-sex experience since age 18. Among men who reported any same-gender sex, 81.6% reported bisexual activity.

There are few population estimates of specific risky sexual behaviors. Two national surveys, NHIS and BRFSS asked composite questions to which participants could indicate that they had done at least one of a list of risky behaviors, including: received clotting factor concentrates, had male to male sex since 1980, taken street drugs by needle, traded sex for money or drugs, or been the sex partner of anyone who could answer “yes” to any of these activities. Of those surveyed, 2.5% of males and 1.6% of females answered “yes” to this question.

Prevalence of injection drug use is difficult to estimate since there are few population based surveys addressing this exposure, and the truth is difficult to elicit. The National Institute on Drug Abuse estimates from the 1998 National Household Survey on Drug Abuse that there are 2.4 million heroin users (0.9% of the population), the majority of whom inject heroin. The 2000 Texas Survey of Substance Use Among Adults, found that 1.2% of the Texas population surveyed reported any lifetime use of heroin and 0.1% report heroin use in the past year. Adults 18-24 had higher prevalence of use (2.2%) than any other age category; males had higher rates than females (1.8% compared to 0.7%).

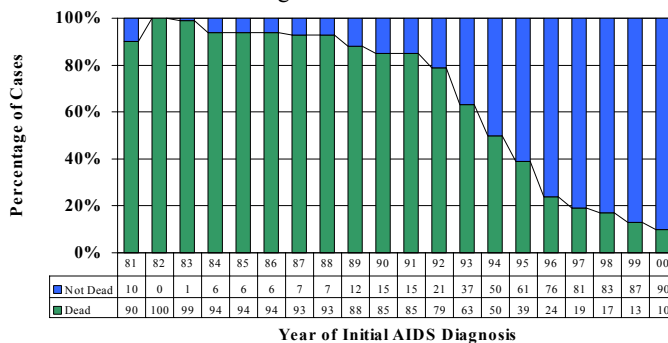
In 1997, the National Institute on Drug Abuse (NIDA) reported that an estimated 1.5 million Americans were current cocaine users. Augmenting this estimate with additional data sources, the number of chronic cocaine users in the U.S. is estimated at 3.6 million (or 1.3% of the population). Adults 18-25 have the highest rates of use; men have higher rates of use than women. By race/ethnicity: 1.4 percent of African Americans, 0.8% of Hispanics, and 0.6% of Whites are current cocaine users. NHANES III indicates that 13.2% of the population admits to having used cocaine or crack in their lifetime (17% of males and 10% of females). These estimates are similar to those reported by the Texas Commission on Alcohol and Drug Abuse which identify 11.7% of the surveyed population as having used cocaine in their lifetime and 1.1% in the past year (1.6% among males and 0.6% among females).

4. AIDS INFECTION: CRUDE MORTALITY

In evaluating the impact of the HIV/AIDS epidemic in Houston we will first examine data from the AIDS surveillance activities. Program evaluation and review has shown that AIDS case reporting in the HDHHS surveillance jurisdiction is 85 to 95 percent complete. The data collected on AIDS cases is based on the CDC reporting criteria and provides demographic, risk factor, and disease information for analysis. Data reported in this section is analyzed from the HIV/AIDS Reporting System (HARS).

As of June 30, 2001, 18,720 cases of AIDS diagnosed through December, 2000 and reported through June 20, 2001, have been reported in Houston/Harris County. Of the reported AIDS cases, 60% are known to have died; however, there is often a lag time from death to the report of death. Health care providers do not routinely report the deaths of AIDS patients to the health department. Death information can be gathered by a match of reported AIDS cases to the State of Texas death registry which is not complete until several months after death. Deaths occurring in other states may or may not be reported to the HDHHS Surveillance Program.

Figure 4.4 Houston/Harris Co. AIDS Percents By Mortality Status
Diagnosed 1981-2000



Houston HIV/AIDS Surveillance

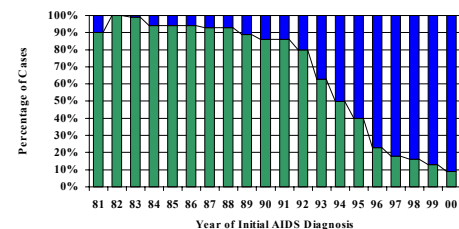
Reported Through 6/30/01

proportion of individuals who have died presented by year of diagnosis has been similar for males and females during the last five years.

Figure 4.4 The proportion of individuals who have died, presented by year of diagnosis. There has been a decrease in the proportion of AIDS cases who have died each succeeding diagnosis year, due to advances in therapy. In addition, since HIV infected individuals may never progress to the point of an AIDS diagnosis, the total number of people living with HIV infection is steadily increasing.

Figures 4.5 and 4.6. The

4.5 Houston/Harris Co. AIDS Percents By Mortality Status
MALES Diagnosed 1981-2000

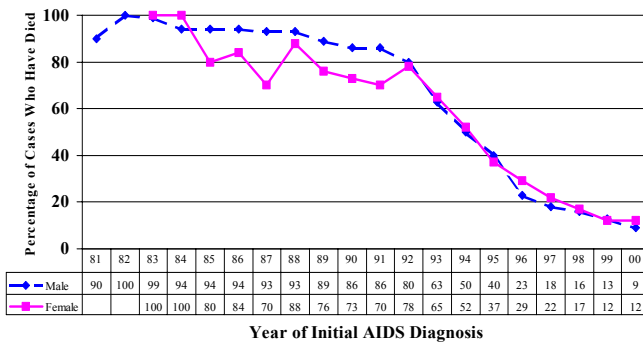


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

4. AIDS INFECTION: MORTALITY BY GENDER & RACE/ETHNICITY

**Figure 4.7 Houston/Harris Co. AIDS
Percent Dead By Gender
Diagnosed 1981-2000**

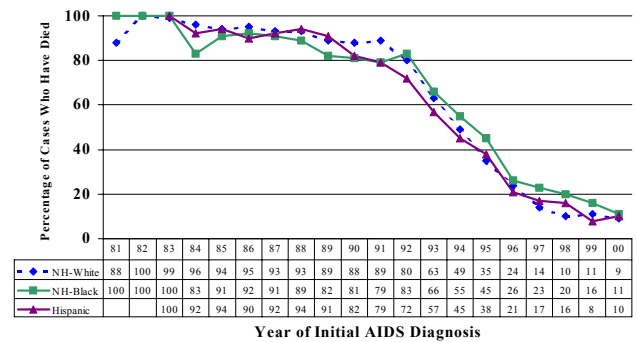


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.8 The percent of HIV infected individuals dying, by year of diagnosis, is similar across race/ethnicity groups. From the beginning of the epidemic to 2000, 68% of non-Hispanic White, 52% of non-Hispanic Black, and 51% of Hispanic HIV infected individuals have died.

**Figure 4.8 Houston/Harris Co. AIDS
Percent Dead By Race/Ethnicity
Diagnosed 1981-2000**

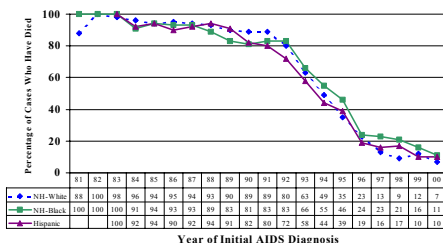


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.9 and 4.10 As of 6/30/01, the proportion of individuals who have died since infection are: among males, 69% of non-Hispanic Whites, 55% of non-Hispanic Blacks and 53% of Hispanics with HIV; among females 49% of non-Hispanic Whites, 41% of non-Hispanic Blacks, and 35% of Hispanics.

**4.9 Houston/Harris Co. AIDS
Percent Dead By Race/Ethnicity
MALE Diagnosed 1981-2000**

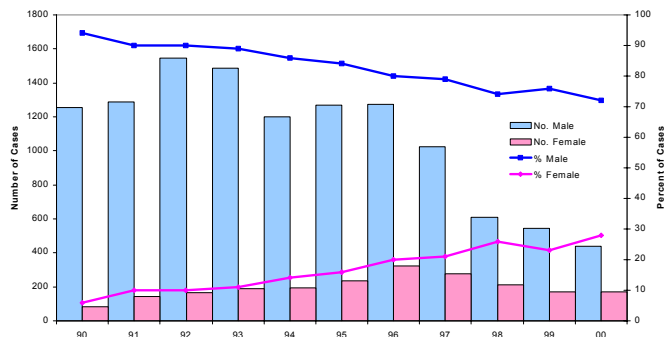


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

4. AIDS INFECTION: CUMULATIVE AIDS CASES BY GENDER

Figure 4.11 Houston/Harris Co. AIDS
Numbers of cases and Percent By Gender
Diagnosed 1990-2000

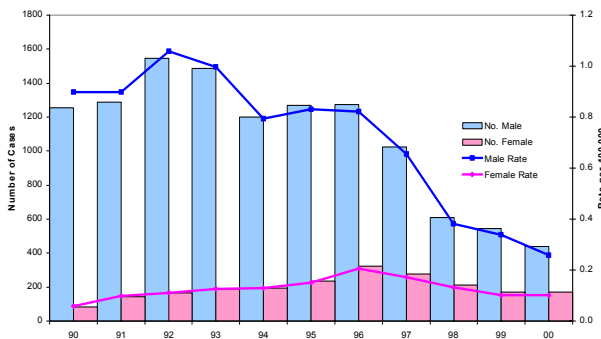


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.11 Percent of AIDS cases by gender. The majority of AIDS cases are male. The proportion of AIDS cases that are female has increased each year. In 1990, 6% of AIDS cases were female; in 2000, 23% are female. However, for both males and females, the number of cases diagnosed each year has been decreasing, it is just that males have been decreasing at a faster rate than females.

Figure 4.12 Houston/Harris Co. AIDS
Numbers of cases and Rates per 100,000 By Gender
Diagnosed 1990-2000



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

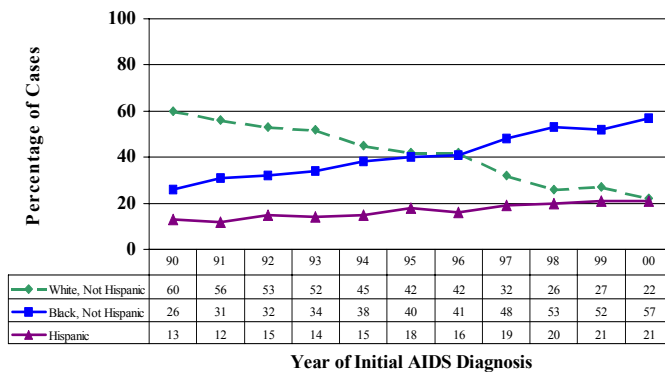
Figure 4.12 Number and rate per 1,000 persons of AIDS cases, by diagnosis year and gender. It is important to emphasize that the numbers of HIV infected individuals progressing to an AIDS diagnosis has decreased in the last 4 years, primarily due to new therapies. Therefore, the reduction in rate of AIDS cases is not directly related to a reduction in rates of HIV infection. Rates are based on intercensal estimates of Houston/Harris County

population for 1991-1999 and on the Census for 1990 and 2000 (Appendix).

4. AIDS INFECTION: CUMULATIVE AIDS CASES BY RACE/ETHNICITY

As the epidemic has progressed, the percent of cases that are non-Hispanic White has declined, while the percent of cases that are non-Hispanic Black has increased correspondingly. The percent of cases that are Hispanic has increased.

**Figure 4.13 Houston/Harris Co. AIDS
Percent By Race/Ethnicity**
Diagnosed 1990-2000



Houston HIV/AIDS Surveillance

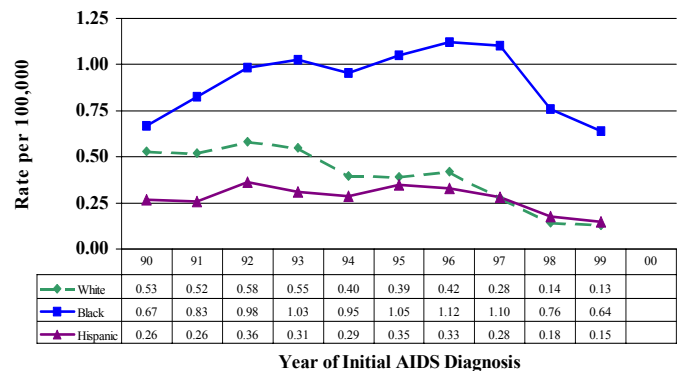
Reported Through 6/30/01

Figure 4.14 Rate of AIDS per 1,000 population, based on intercensal estimates of Houston/Harris County population for 1991-1999 and the 1990 and 2000 census (Appendix). Since 1990, the rate of AIDS has fallen nearly 80% among Whites, almost 50% among Hispanics, and only 14% among Blacks. Since 1996, rates for AIDS have declined 50% among Blacks, 40% among Hispanics, and 26% among non-Hispanic Whites.

Part of the differences may represent when the epidemic peaked among the different race/ethnicity groups. Rates peaked among non-Hispanic Whites in 1992; rates peaked for Hispanics in 1995; rates did not peak for Blacks until 1997.

Figure 4.13 Percent of AIDS cases by race/ethnicity. Although early in the epidemic, the majority of cases were among non-Hispanic Whites, since 1996, the majority are among non-Hispanic Blacks.

**Figure 4.14 Houston/Harris Co. AIDS
Rates per 100,000 By Race/Ethnicity**
Diagnosed 1990-2000

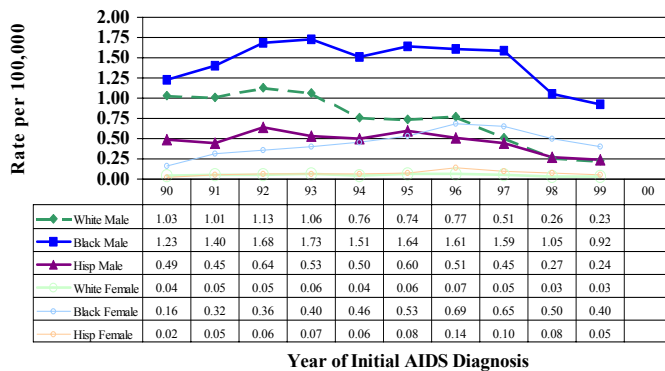


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

4. AIDS INFECTION: CUMULATIVE AIDS CASES BY RACE/ETHNICITY

Figure 4.15 Houston/Harris Co. AIDS Rates per 100,000 By Race/Ethnicity and Gender Diagnosed 1990-2000



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.15 Non-Hispanic Black males have the highest rates in 2000. Rates for non-Hispanic Black females were steadily increasing from 1990 through 1996, and have since declined. However, non-Hispanic Black females have the second highest rates of AIDS.

These data show the disproportionate impact of HIV/AIDS on the minority community and in particular blacks. There was also a slight

increase for Hispanic males and females through 1996, but an overall decrease in the rates for white males.

For all the population categories, a decrease in the rate of AIDS cases is expected as the impact of improved therapies delays or eliminates the progression to AIDS. Continued monitoring of rates will allow an analysis of which populations are benefiting the most (or least) from the treatment methodologies available. At this point in the epidemic, a case of AIDS represents a series of failures. First, a failure to prevent infection, then, a failure to effect good testing behavior in at risk individuals, then, a failure to refer HIV positive individuals into care, then a failure of the treatments offered or the patients compliance to therapy.

4. AIDS INFECTION: CUMULATIVE AIDS CASES BY RACE/ETHNICITY

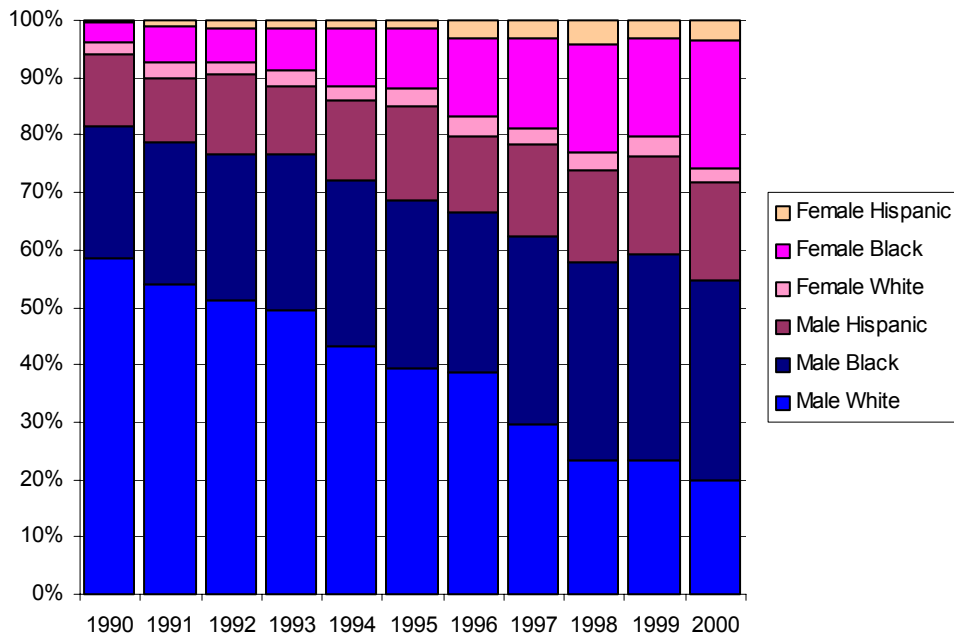
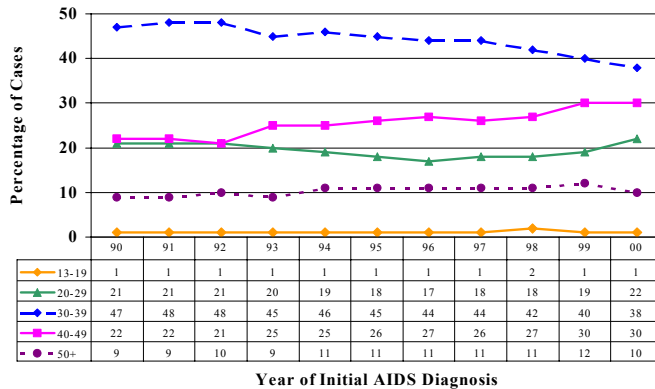


Figure 4.16 Percent of cases by gender and race/ethnicity over time. The proportion of cases that are non-Hispanic White males has declined while the proportion that are non-Hispanic Black males has increased slightly. The proportion of cases that are Hispanic males have remained relatively constant.

Since 1988, the epidemic in females has been predominantly among black women. The proportion of AIDS cases who are black continues to increase. The proportion of diagnosed female AIDS cases who are Hispanic has also increased and the proportion of female AIDS cases who are non-Hispanic White has decreased correspondingly.

4. AIDS INFECTION: AIDS CASES BY AGE CATEGORY

**4.17 Houston/Harris Co. AIDS Percents
By Age Group (13 and over)
Diagnosed 1990-2000**



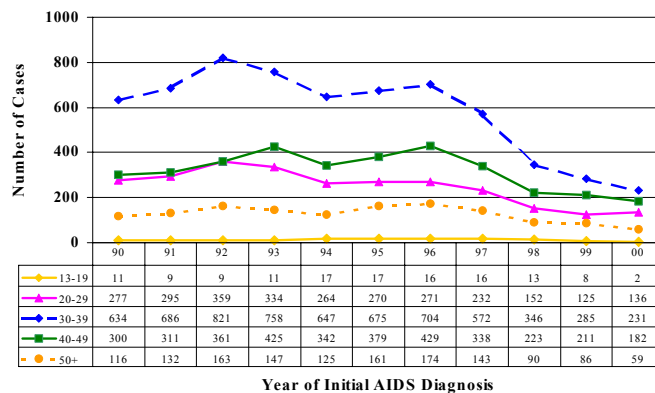
Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.17 The proportion of AIDS cases among age groups for the diagnosis years 1990 through 2000. Over this period of time, nearly 50 % of the AIDS cases diagnosed were 30-39 years of age at diagnosis. Another 40 % are between the ages of 20-29 and 40-49. Therefore, 90 % of the AIDS cases diagnosed each year are between the ages of 20 and 49. This age distribution is different than seen for chlamydia and gonorrhea,

where younger individuals are more likely to be infected, but illustrates the lag between HIV infection and AIDS diagnosis. The distribution has not varied over time except to show a slight aging of the newly diagnosed AIDS population that is expected due to the delaying of onset of AIDS by therapy. In 1990, 22% were diagnosed with AIDS in the 40-49 year range, and in 2000, 30% were diagnosed in this age range.

**4.18 Houston/Harris Co. AIDS Cases
By Age Group
Diagnosed 1981-1999**



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.18 Total number of cases, by age group, has decreased since 1990. The most pronounced decrease is in the 30-39 age group.

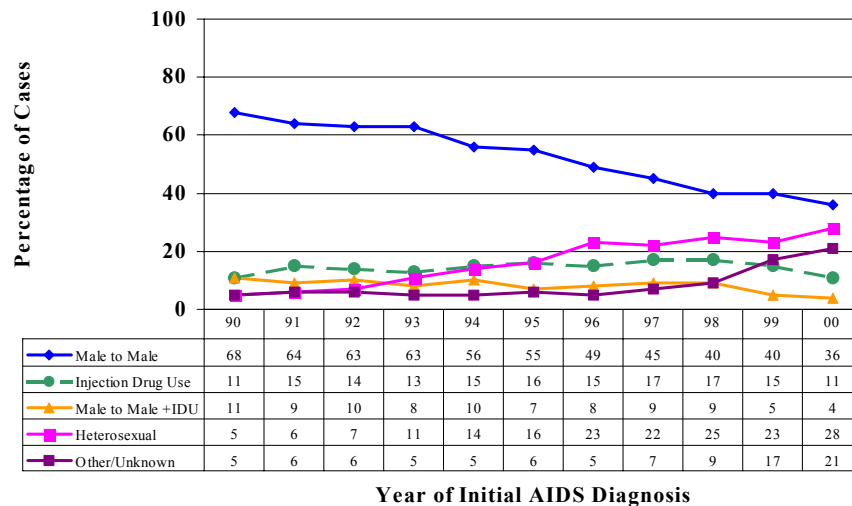
4. AIDS INFECTION: RISK FACTORS OF AIDS CASES

Risk factors for infection with HIV and the subsequent development of AIDS are collected with the basic surveillance information for AIDS cases. The Centers of Disease Control and Prevention has determined a hierarchy of risk factors intended to attribute the “riskiest” of behaviors participated in to each AIDS case. This rating of risk factors designates male to male sexual contact as the highest risk for infection followed by injection drug use and then heterosexual contact with a person who has HIV infection or who participates in one of the higher risk behaviors.

Those people with an AIDS diagnosis who cannot be interviewed, or who do not divulge their behaviors, or who do not know either the HIV status or the risk behavior of their heterosexual partners are assigned to a *No Reported Risk* category.

The increasing numbers of females with AIDS has led to an increase in the number of *No Reported Risk* cases because the heterosexual contact definition imposed by the CDC requires more knowledge of the behavior of the sex partner than is readily available. For a majority of the women diagnosed with AIDS who have *No Reported Risk*, the admitted risk is heterosexual sex but without the details regarding the partner that are necessary to meet the CDC definition of *Heterosexual Contact*.

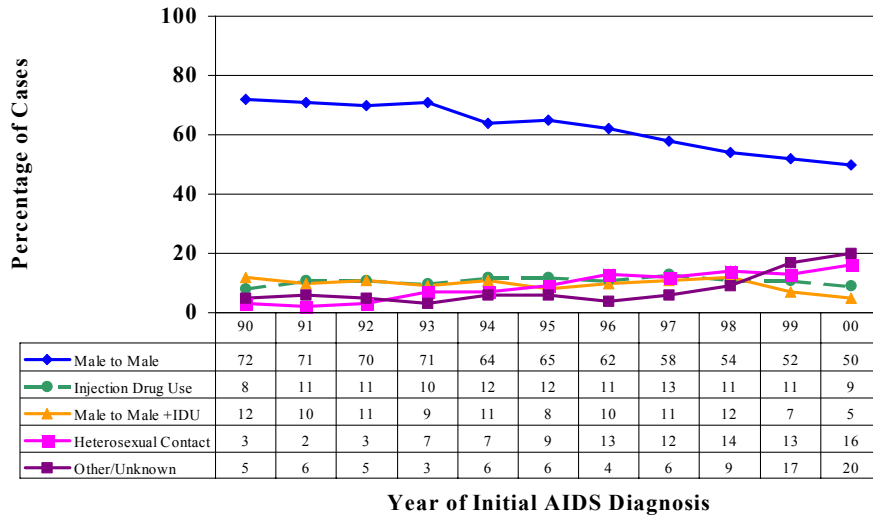
**Figure 4.19 Houston/Harris Co. AIDS Percents
By Mode of Transmission
Diagnosed 1990-2000**



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

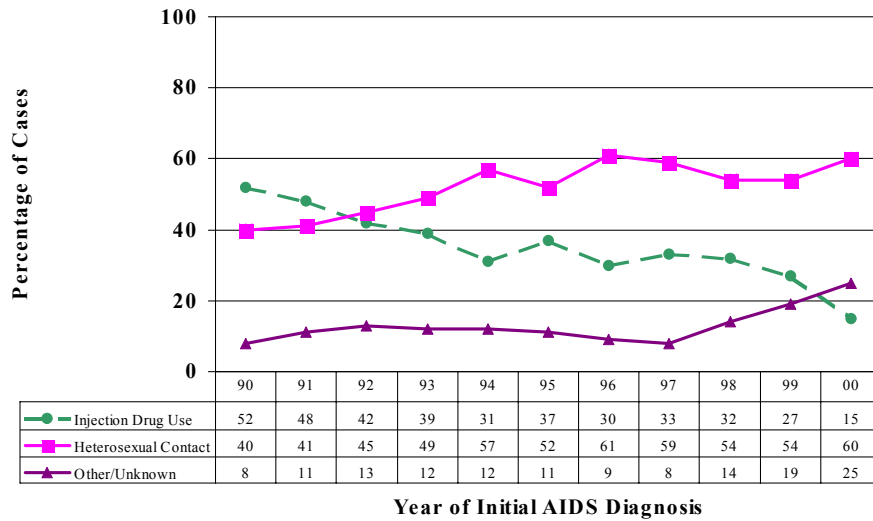
**Figure 4.20 Male Houston/Harris Co. AIDS
Percents By Mode of Transmission
Diagnosed 1990-2000**



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

**Figure 4.21 Female Houston/Harris Co. AIDS Percents
By Mode of Transmission
Diagnosed 1990-2000**



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

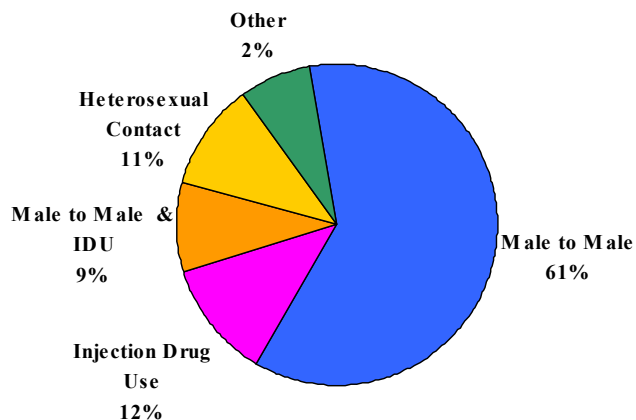
The preceding figures show the change over time for percent of AIDS cases by risk factors for males and females. For males with AIDS, the most common risk behavior remains male to male sexual contact, although as a proportion of all risk behaviors, this continues to decrease. For both males and females there has been an increase in the proportion of AIDS cases with heterosexual contact as the risk behavior as well as an increase in no reported risk cases. For women with AIDS, the proportion with injection drug use as a risk factor was about 50 percent in 1988; that proportion has now decreased to about 15 percent of the AIDS cases diagnosed in women.

For men with AIDS, injection drug use as a risk factor is reported by 11 to 13 percent of the AIDS cases diagnosed each year and there seems to be a downward trend. The combination category of both male to male sexual contact and injection drug use as risk behaviors for infection has decreased over time, presumably due to the decrease in proportions of AIDS cases attributed to male to male sexual contact.

Analysis of risk behavior information indicates that men who have sex with men remain the primary reservoir of infection even though the proportion of cases attributed to male to male sexual contact is decreasing. Injection drug use and heterosexual contact have shown increases in proportion over the past five years, but they remain a smaller proportion of all cases diagnosed.

A previous effort of the HIV/AIDS Surveillance Program is to examine AIDS cases initially reported with no risk information to determine if risks identified later in their infection were significantly different from those AIDS cases who were initially reported with a confirmed risk behavior. Figure 4.22 and 4.23 below display charts indicating that there was no major difference in the proportion of risk behaviors reported for either group. In Figure 4.2, risk factors ascertained at diagnosis through 2000 are presented. In Figure 4.3, risk factors are more complete, because those individuals who first had no risk factors identified and were later classified (through 1999) are represented. The primary risk behaviors for infection were male to male sexual contact and injection drug use. For women, the primary risk behavior was heterosexual contact with a partner at risk for HIV infections.

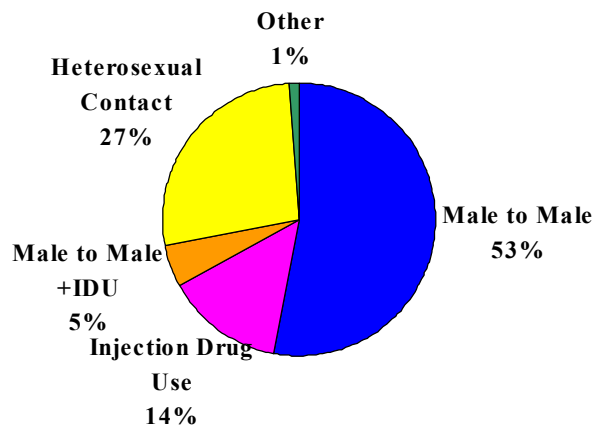
Figure 4.22 Houston/Harris Co. AIDS Risk Classification
Diagnosed 1981-2000



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.23 Houston/Harris Co. AIDS Cases
Reclassified From “No Risk Reported”
to a Risk Category
Diagnosed 1981-1999



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

The proportion of risk behaviors determined for those cases initially reported with *no risk* are slightly different from those who were initially reported with a risk behavior, perhaps reflecting the difficulty of reporting a heterosexual risk. Initially reported risk has a smaller proportion of heterosexual contact cases and more male to male sexual contact cases. When the reclassified *No Risk Reported* cases are added back into the total dataset, the proportions of each risk category do not change significantly. Therefore, the analysis of behaviors can rely on reported risk. As more and more cases are reported with no risk, future studies will continue to attempt to document and further clarify risk behaviors and monitor the trends in risk behaviors associated with infection.

Given the information presented that the proportion of AIDS cases who are minorities and who are female is increasing over time, it is important to review the risk behaviors associated with infection across gender and racial groups, to determine appropriate directions for prevention interventions.

Figure 4.24 Male Percents by Mode of Transmission. A comparison of the risk behaviors of male AIDS cases in the first 13 years of the epidemic to the last five years, shows a decrease in the percentage of cases attributed to male to male sexual contact and to the dual risk category of male to male sexual contact and injection drug use. There has been an increase in the proportion of male AIDS cases attributed to injection drug use and a larger increase in the proportion of male AIDS cases attributed to heterosexual contact – the result of a substantial decrease in the proportion attributed to male to male sex.

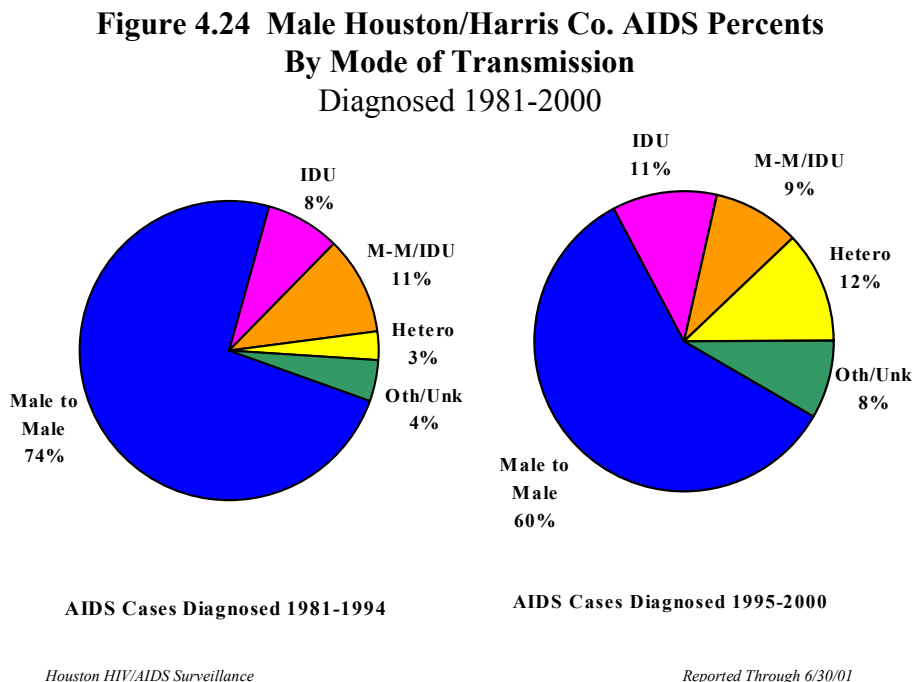
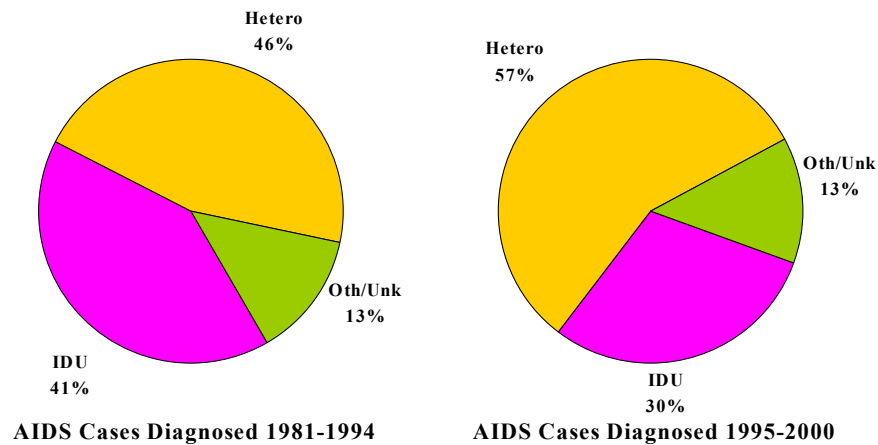


Figure 4.25 Female Percents by Mode of Transmission. A comparison of the risk behaviors of female AIDS cases in the first 13 years of the epidemic to the last five years, shows a decrease in the percentage of cases attributed to injection drug use and a substantial increase in the proportion of female AIDS cases attributed to heterosexual contact.

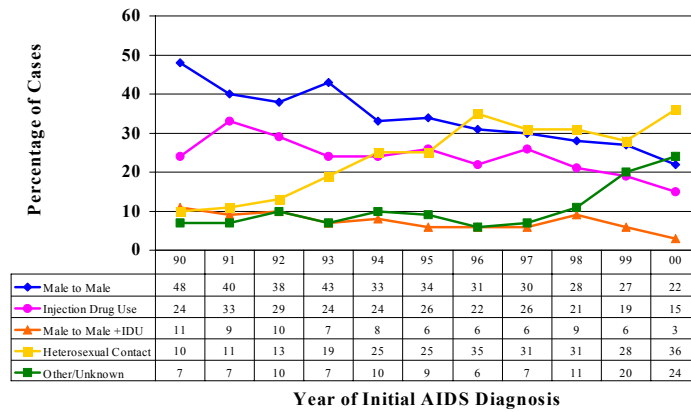
**Figure 4.25 Female Houston/Harris Co. AIDS Percents
By Mode of Transmission
Diagnosed 1981-2000**



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.26 Houston/Harris Co. AIDS Percents among Blacks, By Mode of Transmission
Diagnosed 1990-2000

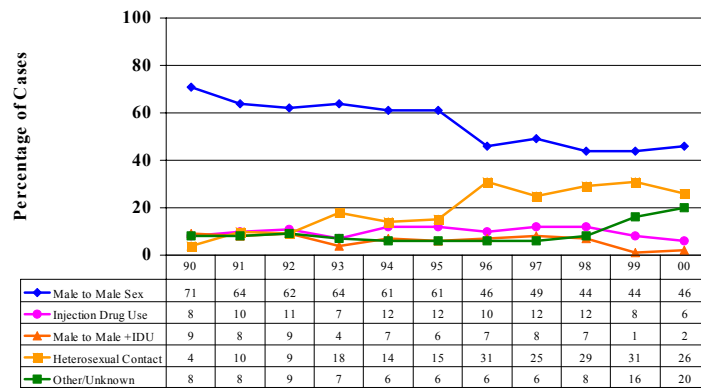


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

A look at the trend of risk behaviors for black AIDS cases shows the same general trends as for all AIDS cases. There has been a decrease in the number of cases attributed to male to male sexual contact and increases in heterosexual contact as a proportion of risk behavior. However, there has also been an increase in the cases with undetermined transmission mode and these may represent un-declared male to male transmission. Among Hispanics, male to male sex as a risk factor has not been declining.

Figure 4.27 Houston/Harris Co. AIDS Percents among Hispanics, By Mode of Transmission
Diagnosed 1990-2000

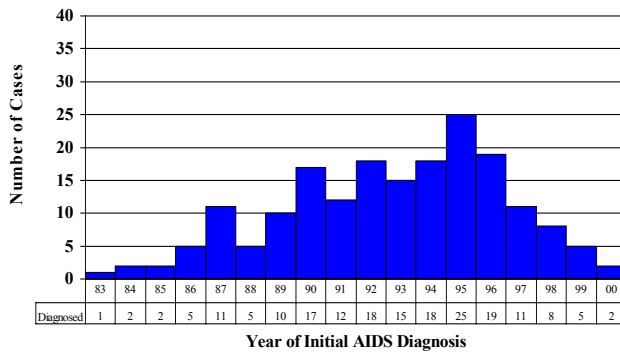


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

4. AIDS INFECTION: PEDIATRIC AIDS

**4.28 Pediatric (<13 Years) AIDS Cases
Houston/Harris County
Diagnosed 1983-2000**

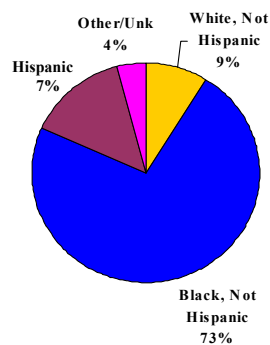


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

pregnancy and delivery and to the child at birth and for six weeks to prevent perinatal transmission of HIV. The second is the improved therapeutic regimens for the infected children that has delayed the onset of severe morbidity including AIDS.

**4.29 Perinatally Exposed Children By
Race/Ethnicity Houston/Harris County
Born 1993-2000**

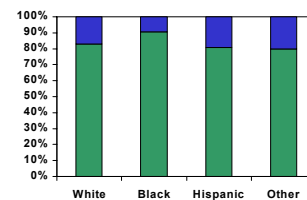


Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.30 Perhaps representing differences in access to care, of infants exposed to perinatal HIV, 18% of Whites, 9% of Blacks, 20% of Hispanics, and 20% of all other race/ethnicity groups became infected with HIV.

**4.30 Percent of children exposed to perinatal
HIV who have become infected by 6/30/01**



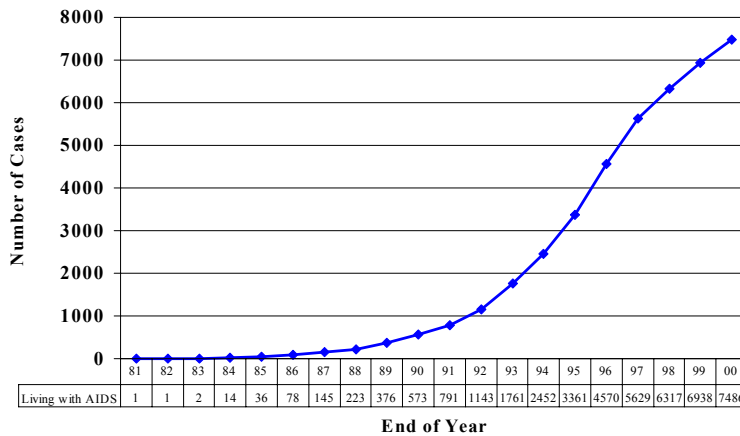
Houston HIV/AIDS Surveillance

Reported Through 6/30/01

4. AIDS INFECTION: LIVING AIDS CASES

4.30 Living Houston/Harris Co. AIDS Cases

Living As Of The End Of Each Year (1981-2000)



Houston HIV/AIDS Surveillance

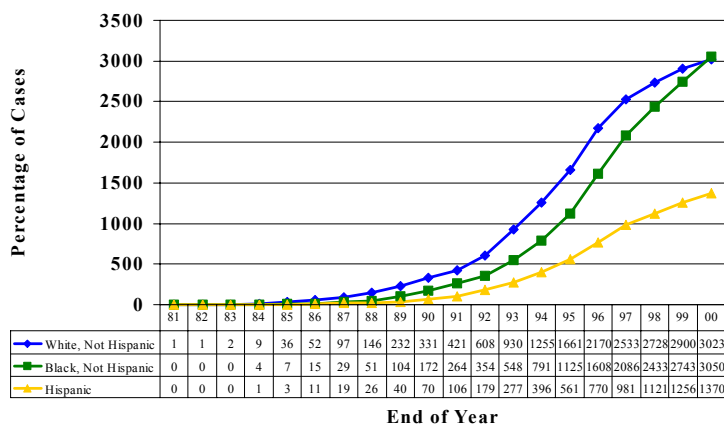
Reported Through 6/30/01

An analysis of the number of living AIDS cases at the end of each year can show the increasing numbers of people dealing with HIV disease and the potential pool of infected individuals needing care and possibly spreading the infection. The following chart shows the number of living AIDS patients in the area at the end

of each report year.

4.31 Living Houston/Harris Co. AIDS Cases By Race/Ethnicity

Percent Living As Of The End Of Each Year (1981-2000)



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

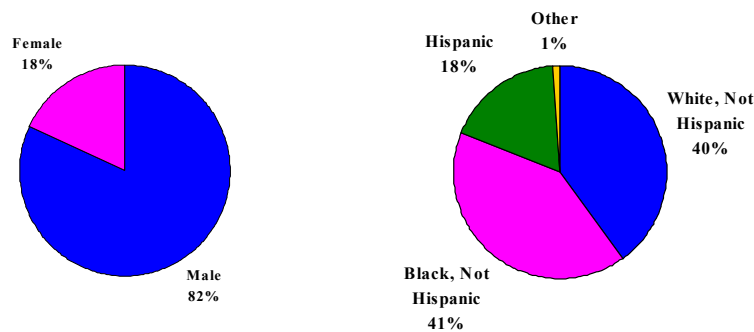
Even with the decrease in new AIDS cases because of the therapeutic regimens, the number of people living with AIDS is increasing dramatically each year. There are now nearly equal numbers of Whites and Blacks living with AIDS and the number of Hispanics living with AIDS is increasing.

These changes in the demographics of people living with AIDS, illustrate why the minority AIDS cases represent an increasing proportion of all AIDS cases. Early in the epidemic, the majority of AIDS cases were white males, as the epidemic progressed, more minority became

infected.

Figure 4.32 and 4.33. 82% of the persons living with AIDS are male; 43 % are white, 39 % black, and 17 % Hispanic. Half the people living with AIDS have male to male sexual contact as a risk factor for infection, 15 % have injection drug use and 9 % have the combination risk factor of male to male sexual contact and injection drug use. 17 % have a risk behavior associated with heterosexual contact and 7 % have no reported risk.

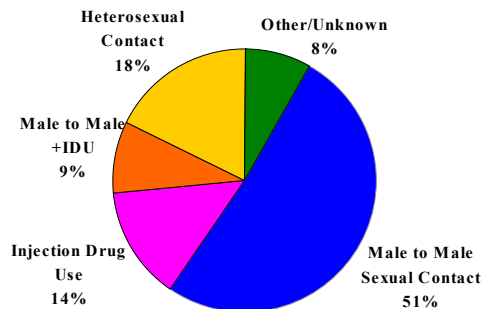
Figure 4.32 Living AIDS Cases by sex, and by race/ethnicity
Houston/Harris County
Diagnosed 1981-2000



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Figure 4.33 Living Houston/Harris Co. AIDS
Percents By Mode of Transmission
Diagnosed 1981-2000



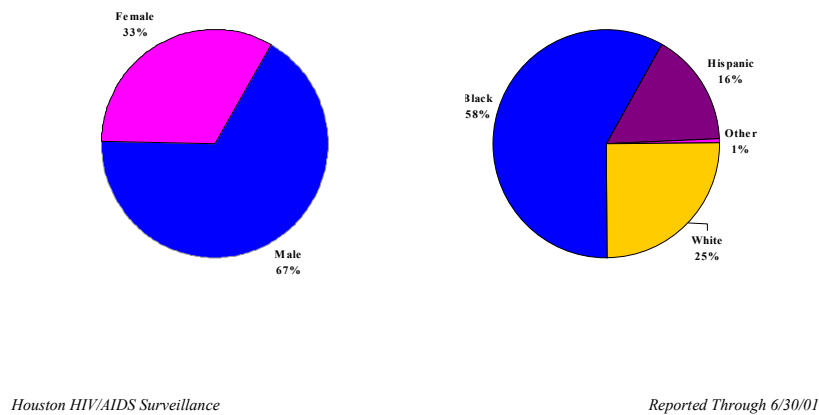
Houston HIV/AIDS Surveillance

Reported Through 6/30/01

4. AIDS INFECTION: HIV INFECTIONS

As of January 1, 2000, HIV infection became reportable by name in the State of Texas for all people. The data collected to date is preliminary and will change over time. Reporting new HIV infections will become a useful tool in tracking the epidemic.

Figure 4.34 Houston/Harris Co. HIV Infection Percents
By Gender and Race/ethnicity
Diagnosed January 1999 through June 2000

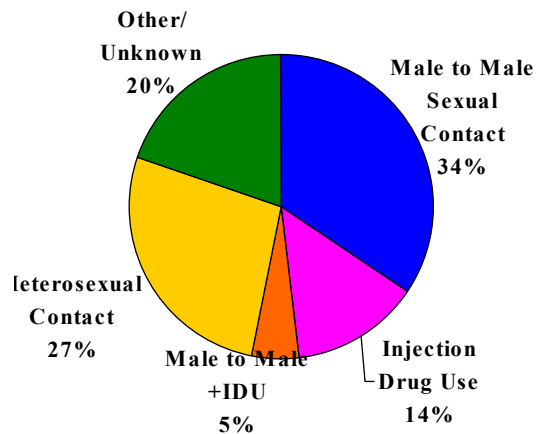


The demographic mix of the HIV infection reports in terms of gender also follow the same trend as has been recorded for AIDS cases and living AIDS cases in that the direction is for increasing proportions of women and corresponding decreases in the proportion of men.

The majority of those newly infected with HIV are males. Of new infections, 58 % were blacks, 16% were Hispanic, and 25% were non-Hispanic Whites.

This data may be assumed to represent the newest diagnosed infections, not necessarily the newest infections, and therefore the most current information as to who is becoming infected with HIV. The trend seen in cumulative AIDS cases and living AIDS cases is continued in this data with an increasing proportion of minorities and a decrease in the proportion of white cases.

**Figure 4.35 Houston/Harris Co. HIV Infection Percents
By Mode of Transmission**
Diagnosed January 1999 through June 2000



Houston HIV/AIDS Surveillance

Reported Through 6/30/01

Of the HIV infection reports collected since 1999, 34 % were attributed to male to male sexual contact, 14 % to injection drug use and 5 % to the combined category of male of male sexual contact and injection drug use.

The proportion of injection drug users is a little higher than in the AIDS case reports, but the male to male sexual contact reports follow the same pattern of a lower percentage of the cases. The other increases are in heterosexual contact cases and no risk reported cases. These two changes reflect the same changes as seen in the other AIDS data.

4. AIDS INFECTION: SEROSURVEILLANCE DATA

One of the factors involved in assigning “risk” to a particular behavior is the prevalence of HIV in the population engaging in the particular behavior. Of course, other factors such as frequency of the behavior, numbers of possible partners and specific exposure potential of a behavior must also be considered. HIV is spread primarily through the exchange of body fluids during sexual activity or through direct blood transmission as occurs during needle sharing while using injection drugs. If a certain population has absolutely no HIV infection, then no behavior within that group can promote transmission of HIV. In order to determine which behaviors in a particular community put people at most risk of becoming infected with HIV, and therefore which behaviors should be targeted for HIV prevention, the prevalence of HIV among that population must be determined.

Data about prevalence of HIV in specific population is collected by the serosurveillance program through seroprevalence studies that have been conducted among various populations and from the seroincidence study currently underway in two STD clinics.

Seroprevalence studies are conducted in populations that are grouped together for reasons other than their HIV infection status. Examples may be the population of people attending a specific clinic or visiting a certain community organization. In an unlinked seroprevalence study, blood specimens drawn for a purpose other than HIV testing are used to test the entire population at that site for HIV. The specimens are stripped of any identification prior to HIV testing, so the results do not give the HIV status of any individual, but rather the overall prevalence of the group. In linked seroprevalence studies, the individual knows that they are being tested and give permission to participate in a study. Usually a questionnaire about specific behaviors is administered to the individual to get a more complete picture of possible risk behaviors.

The seroprevalence surveys in STD clinics are useful for determining prevalence of HIV in a population who are having unprotected sex. The reason for seeking care at an STD clinic is usually due to a suspected STD or contact to someone with and STD. Risk behaviors are identified from client records and the following table shows the rates of HIV positivity for those male that were identified as having male to male sexual contact.

Table 4.1 HIV Positive rates among men who have sex with men (MSM) 1991 through 1999 HIV Seroprevalence Survey, Houston, Texas.

Survey Year	Number of Sites	Number HIV Positive / Number Tested	Percent Positive
1991	4	234 / 577	40.5
1992	4	151 / 432	35.0
1993	4	151 / 487	31.0
1994	4	140 / 457	30.6
1995	4	114 / 453	25.2
1996	4	157 / 502	31.3
1997	4	125 / 574	21.8
1998	4	86 / 420	20.5
1999	4	57 / 443	12.9

In the above table, the mean percent infected combining the four clinics, as decreased over time. The highest rate was seen in the 1991 survey period. For the last two survey years the rates were 20 and 12 percent. This trend follows that seen in the AIDS case data with a decreasing proportion of the recent AIDS cases attributed to male to male sexual contact.

4. AIDS INFECTION: SEROSURVEILLANCE DATA ADOLESCENT MALES

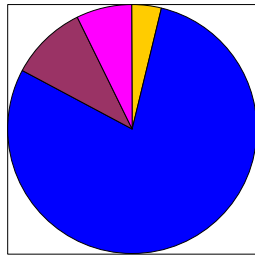
During 1992 through 1999, blinded seroprevalence studies were conducted in various STD clinics in Houston. The following chart reflects the results of those studies through December 1999. This table focuses on adolescents (less than 20 years of age) receiving care at the STD clinics.

Table 4.2 HIV Seroprevalence Survey in Adolescent Clinics. Houston, Texas. 1992-1999.

	Tests	# Positive	% Positive
Total	17,287	63	0.36
Gender			
Male	678	2	0.29
Female	16,477	61	0.37
Ethnicity			
Black	9,896	61	0.62
White	1,658	0	0.00
Hispanic	5,431	2	0.04
Other	171	0	0.00
Risk Behavior			
Gay/Bisexual Male	3	0	0.00
Reported IDU	17	0	0.00
Hetero Partner at Risk	31	2	6.45
Blood Recipient	28	0	0.00
Sexual Contact	16,593	57	0.34
Unknown	486	4	0.82

4. AIDS INFECTION: SURVEY OF CHILDBEARING WOMEN

The 1997 Survey of Childbearing Women in Texas included 93,992 women giving birth during the three month study period. TDH Region 6 tested 20,143 women with the following rates per 1000 live births in Harris County. The 1997 survey was smaller than in previous years but showed an increase in HIV infection from 1995 (1.05 compared to 0.93)



Houston HIV/AIDS Surveillance

Reported Through 6/30/99

Table 4.3 Survey of Child Bearing Women,

Race	Rate per 1,000 live births
White	0.62
Black	12.61
Hispanic	1.60
Other	1.14
All Races	3.06

These rates correspond to the racial breakdown of pediatric AIDS cases reported in Houston. More than 60% of the pediatric AIDS cases are Black, 15% are White and 23% Hispanic.

As the table below indicates, Houston/Harris County continues to have the highest rate of HIV infection among child-bearing women in the state. The rate is increasing significantly in the black community and Houston has currently over twice the rate of other cities among this minority group. In Harris County, the HIV positive rate among women giving birth is twenty times higher for black women than for white women (12.61 vs 0.62) and eight times higher than for Hispanic women (12.61 vs 1.60).

Table 4.4 1997 Texas Survey of Childbearing Women Seroprevalence of HIV per 1000 li

County	White	Black
Bexar	0.00	3.64
Dallas	0.53	4.84
El Paso	0.00	0.00
Harris	0.62	12.61
Tarrant	0.00	0.00
Travis	0.00	0.00
All Others	0.16	4.72
Statewide	0.23	6.37

4. AIDS INFECTION: SUMMARY

All data presented in this profile of the HIV/AIDS epidemic in Houston/Harris County show consistency in trends in both numbers and proportions of people infected with the HIV virus.

Although the number of new AIDS cases each year is decreasing, the number of people living with HIV and AIDS is increasing. The total number of people needing services and case as well as the number needing prevention education has risen dramatically over the last several years.

At the same time as the numbers of people living with HIV infection and AIDS is increasing, the demographic mix of those people has changed. Whether examining diagnosed AIDS cases, or AIDS population rates, or living AIDS cases only, or HIV test results, the data show an epidemic that is increasingly minority, increasingly female, and increasingly heterosexually transmitted.

While the increases are clearly seen in the proportions of females, minorities, and heterosexuals, there remains a large number of white males and men who have sex with men in the new AIDS cases each year, and in those living with AIDS. Without a good number for the denominator, AIDS case rates are not possible for the at risk populations, but seroprevalence rates in the STD clinic population show a 20 percent infection rate in the clients who report male to male sexual contact as a risk behavior for HIV infection.

Pediatric AIDS has decreased considerably in Harris County, but the children who are exposed are disproportionately black, consistent with the observed trends. The Texas Department of Health's Survey of child-bearing women also shows a high and disproportionate number of black females giving birth who are HIV positive.

The challenge for prevention and service oriented programs in the Houston area will be in maintaining the high quality of activities in the populations who were initially and remain affected by this epidemic, while increasing the focus on, and changing the methodologies to match, the developing epidemic in the minority female and heterosexual communities.

REFERENCE

1. Division of STD Prevention. *Sexually Transmitted Disease Surveillance* 19987. U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, September, 1999..
2. Department of Health and Human Services. *Healthy People 2000: Midcourse Review and 1995 Revisions*. U.S. Department of Health and Human Services, Public Health Service. U.S. Government Printing Office, Washington, D.C., September, 1990.
3. Institute of Medicine. *The Hidden Epidemic. Confronting Sexually Transmitted Diseases*. National Academy Press: Washington D.C., 1997.
4. Division of STD Prevention. *Surveillance 1997 Supplement. Chlamydia Prevalence Monitoring Project Annual Report – 1997*. U.S. Department of Health and Human Services, Public Health Service. Atlanta: Centers for Disease Control and Prevention, September, 1997.
5. King Holmes et. al, editors. *Sexually Transmitted Diseases*, Third Edition. McGraw-Hill: New York, 1999.
6. Fox KK, Whittington W, Levine WC, Moran JS, Zaidi AA, Nakashima AN. Gonorrhea in the United States, 1981-1996: demographic and geographic trends. *Sexually Transmitted Diseases* 1998;25(7):386-393.
7. Population Projections, 1.0 Scenario, Texas State Data Center, Texas Population Estimates and Projections Programs, Texas A&M University, March, 1997. Last Updated May 29, 1998.
<http://www.tdh.texas.gov/programs/shd&pa/popdata/menup.htm>
8. Source: 1990 Census: Harris County Health Department, Houston-Galveston Area Council, US Census.
9. National syphilis plan aims for under 1,000 cases by 2005. *STD Advisor* 1999;2(2):37.
10. Risser JMH, Hwang L-Y, Risser WL, Hollins L, and Paffel J. The epidemiology of syphilis in the waning years of an epidemic: Houston, Texas, 1991-1997.
11. MMWR 1998;47:RR-12. HIV Prevention Through Early Detection and Treatment of Other Sexually Transmitted Diseases – United States. Recommendations of the Advisory Committee for HIV and STD Prevention.